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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,760	04/09/2004	Jyh-Shin Pan	3722-0188PUS1	8827

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EXAMINER

LAMB, CHRISTOPHER RAY

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 12/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/820,760

Applicant(s)

PAN ET AL.

Examiner

Christopher R. Lamb

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-14,18,19 and 21-29 is/are rejected.
- 7) ☒ Claim(s) 2,5,15-17,20 and 30-32 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/9/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1, 3, 4, 6-8, 12-14, 18, 21-23, and 27-29 are rejected under 35 U.S.C. 102(a) as being anticipated by Hasegawa et al. (US 2003/0072229).

Regarding claim 1:

Hasegawa discloses:

A recording method for controlling a recording operation of recording a recording data on an optical storage medium so as to locate a starting position of a succeeding recording operation after a condition of interruption occurs to interrupt the recording operation (abstract; specifically, embodiment 4, paragraphs 98-101, is relied upon: however, this embodiment is essentially an earlier embodiment without one component, as noted in paragraph 101, so the disclosure of the earlier embodiment will also be referenced in the rejection), the method comprising:

Art Unit: 2627

recording a special pattern on the optical storage medium after the condition of interruption occurs and before the recording operation is interrupted (paragraph 100: the subcode sync is recorded before recording is interrupted);

locating the starting position (paragraph 100),

wherein a recorded data signal is obtained from the optical storage medium for searching for the special pattern after the condition of interruption is eliminated (the detection of the subcode sync is described in paragraph 79), and

a detection signal is enabled with a delay of a detection delay time after the recorded data signal is detected to be similar to or the same as a portion of the special pattern (the detection signal is described in paragraph 79: some slight delay time is inherent to all processes in the drive);

enabling a recording laser with a delay of a link delay length after the detection signal is enabled (as noted in paragraph 100, the original recording may be stopped a predetermined number of clock cycles after the subcode sync, and restarted there); and

performing the succeeding recording with a delay of a laser enable time after the recording laser is enabled (a laser enable time is inherent to the drive).

Regarding claim 3:

In Hasegawa the step of recording the special pattern on the optical storage medium comprises a step of inserting the special pattern into the recording data (the subcode sync detected by Hasegawa is a standard sync element inserted into recorded data).

Regarding claim 4:

In Hasegawa the step of recording the special pattern on the optical storage medium further comprises a step of calculating a length of the recording data behind the special pattern and defining it as a rest length (paragraph 100: Hasegawa doesn't use the term rest length, but the "predetermined, relatively small number of clock cycles" is equivalent).

Regarding claim 6:

In Hasegawa the special pattern comprises a data pattern that can be detected as being different from a normal format of the recording data (the subcode sync is detectable as being different than the data around it).

Regarding claim 7:

In Hasegawa the special pattern comprises a data pattern that does not appear in the recording data (subcode sync elements are not data).

Regarding claim 8:

In Hasegawa the special pattern comprises a data pattern having a length of continuously identical signal status greater than the maximum length of continuously identical signal status of the recording data (not specifically disclosed, but inherent: Hasegawa discloses this method for use with CDs, and the in the CD standard subcode syncs comprise elements longer than the maximum run length of the data).

Regarding claim 12:

In Hasegawa the step of recording the special pattern on the optical storage medium further comprises steps of providing a data position of the recording data from detecting an address information of the recording data (paragraph 75), and storing the

Art Unit: 2627

data position of the recording data corresponding to where the special pattern on the optical storage medium is recorded as a special pattern data position (paragraph 75).

Regarding claim 13:

In Hasegawa the step of locating the starting position comprises steps of subtracting a predetermined value from the special pattern data position to obtain a special pattern searching data position (paragraph 75), providing a data position of the recorded data signal from detecting an address information of the recorded data signal (paragraph 79), and starting to search for the special pattern according to the data position of the recorded data signal and the special pattern searching data position (paragraph 79).

Regarding claim 14:

In Hasegawa the step of locating the starting position further comprises a step of stopping the searching for the special pattern after searching for the special pattern within a predetermined range (it only looks for the subcode sync of the particular block address, paragraph 79: thus it inherently stops the search outside of that block).

Regarding claims 18, 21-23, and 27-29:

These claims are to a recording drive corresponding to the method of the earlier claims. As Hasegawa discloses a drive along with the method, these claims are rejected as per the earlier claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2627

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9-11 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa.

Regarding claims 9-11:

These claims are identical to claims 12-14 except in that they use "a physical address of the optical storage medium from detecting an address information prerecorded on the optical storage medium" instead of the "data position of the recording data from detecting an address information of the recording data."

As noted in the rejection of claims 12-14 above, Hasegawa discloses using the address information of the recording data; Hasegawa does not disclose using the "address information prerecorded on the optical storage medium" as per claims 9-11.

However, Hasegawa does disclose a means to read the address information prerecorded on the optical storage medium (the ATIP decoder of paragraph 57).

It would have been obvious to one of ordinary skill in the art to include in Hasegawa to use address information prerecorded on the optical storage medium instead of address information of the recording data, because the two kinds of address information are used in the same environment, for the same purpose, and achieve the same result. Furthermore, one of ordinary skill would have expected the Applicant's invention to work equally well using the address information of the recording data instead of the address information prerecorded on the optical storage medium (as shown by Applicant's claims 12-14).

Art Unit: 2627

Regarding claims 24-26:

These are device claims corresponding to method claims 9-11 and are similarly rejected.

6. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa in view of Pan (US 2002/00478240).

Regarding claim 19:

Hasegawa discloses a recording drive as discussed above.

Hasegawa discloses that the data recording module further comprises:

a rest length calculating unit for calculating a rest length of the recording data after the special pattern and before the recording enable signal being disabled (necessary to implement the "predetermined...number of clock cycles" of paragraph 100);

Hasegawa does not disclose:

a subtractor for receiving the rest length and a compensation value and subtracting the compensation value from the rest length to generate a recording delay length;

a delay enabling unit for receiving the special pattern detection signal and enabling the recording enable signal with a delay of the recording delay length after the special pattern detection signal is enabled (however, Hasegawa must have a delay enabling unit for at least the rest length to implement paragraph 100).

Pan discloses that the recording start position must be advanced by a compensation value (the laser power settling time) to avoid data grabbing error (paragraph 61).

It would have been obvious to one of ordinary skill in the art to advance the recording start position in Hasegawa by a compensation value, as taught by Pan (in other words, the recording should be enabled slightly earlier to account for the laser power settling time).

To implement this would require a subtractor for receiving the rest length and a compensation value and subtracting the compensation value from the rest length to generate a recording delay length; and then using that recording delay length in the delay enabling unit.

The motivation would have been to avoid data grabbing error, as taught by Pan.

Allowable Subject Matter

7. Claims 2, 5, 15-17, 20, and 30-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 2:

The closest prior art of record, Hasegawa, does not disclose wherein the special pattern replaces a portion of the recording data (it is instead inserted). This limitation in

Art Unit: 2627

combination with the other elements of the claim renders it allowable over the prior art of record.

Regarding claim 5:

The closest prior art of record, Hasegawa in view of Pan (as applied to claim 19 above), does not disclose wherein the link delay length is determined by subtracting the detection delay time and the laser enable time from the rest length (only the laser enable time is accounted for, as per the rejection above). This limitation in combination with the other elements of the claim renders it allowable over the prior art of record.

Regarding claim 15:

The closest prior art of record, Hasegawa, does not disclose a step of storing a distance between the special pattern and a frame sync pattern of the recording data, because in Hasegawa the special pattern is the frame sync pattern. This limitation in combination with the other elements of the claim renders it allowable over the prior art of record.

Regarding claims 16 and 17:

They are dependent on claim 15 and thus contain its allowable subject matter.

Regarding claims 20 and 30-32:

They contain language similar to that of claims 2, 5, and 15-17.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shimoi et al. (US 2003/0095479); Tsukihashi et al. (US 6,560,180); Kuroda et al. (US 6,252,838).

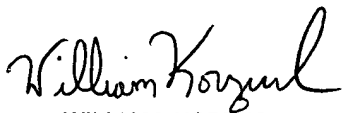
Art Unit: 2627

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Lamb whose telephone number is (572) 272-5264. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CRL 12/4/06


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